DOCUMENT RESUME

ED 441 548 JC 000 393

TITLE	Underprepared Students: Placement, Enrollment, and Achievement. Enrollment Analysis.
INSTITUTION	Prince George's Community Coll., Largo, MD. Office of Institutional Research and Analysis.
REPORT NO	EA99-3
PUB DATE	1999-02-00
NOTE	13p.
PUB TYPE	Reports - Evaluative (142)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Basic Skills; Educationally Disadvantaged; *Enrollment; *Outcomes of Education; *Remedial Instruction; Student Needs; Two Year Colleges
IDENTIFIERS	*Prince Georges Community College MD

ABSTRACT

As the most recent update of the profile of underprepared students, this enrollment analysis examines: (a) the basic skills deficiencies of the fall 1998 entrants; (b) the basic skills deficiencies of the new county high school graduates within the entrant cohort; (c) the fall 1998 collegewide developmental course enrollment; and (d) the developmental progress and academic outcomes of the fall 1994 entrants. Major findings include the following: about 70 percent of the entering students at Prince George's Community College (PGCC) in fall 1998 who completed the placement test battery in all three basic skills areas had remedial needs in at least one area; the percentages of underprepared students in individual basic skill areas increased by 3% over the previous year; a similar pattern of increasing basic skills deficiencies was observed among the 1998 county high school graduates who entered PGCC in the fall semester of the same year; more than one-sixth of the credit students took at least one developmental course in fall 1998; developmental courses accounted for 12% of the total fall 1998 college hours; the four-year achievement rate for the fall 1994 entrants was 5% lower than that for the fall 1990 entrants; entering students who passed all the placement tests in fall 1994 were more likely to become academic achievers than their peers with remedial needs; and fall 1994 entering students who completed all their developmental work achieved at about the same rate as their peers who did not need remediation. (VWC)

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ED 441 548

PRINCE GEORGE'S COMMUNITY COLLEGE
Office of Institutional Research and Analysis

UNDERPREPARED STUDENTS
PLACEMENT, ENROLLMENT, AND ACHIEVEMENT

Enrollment Analysis EA99-3
February 1999

P. Larkin

Introduction

Every fall semester, a large number of students entering PGCC are identified as being deficient in at least one of the three basic skill areas of reading, written expression, and mathematics. Since these students are more likely to drop out than their peers because of their inadequate preparation for college-level course work, it is important that their enrollment and achievement data be collected on a regular basis so that informed policy decisions can be made to help them integrate into the academic and social systems of the college successfully. The Office of Institutional Research and Analysis has monitored the remedial needs and academic progress of the underprepared students at PGCC for several years. As the most recent update of the profile of these students, this enrollment analysis examined (a) the basic skills deficiencies of the fall 1998 entrants, (b) the basic skills deficiencies of the new county high school graduates within the entrant cohort, (c) the fall 1998 collegewide developmental course enrollment, and (d) the developmental progress and academic outcomes of the fall 1994 entrants.

Basic Skills Deficiencies of the Fall 1998 Entrants

As displayed in Table 1 on page 2, about seven-tenths of the students entering PGCC in fall 1998 who completed the placement test battery in all three basic skill areas had remedial needs in at least one area. About a quarter of the tested students lacked proficiencies in all three areas. Inspection of Table 2 on page 2 further indicates that the proportion of tested students who needed remediation in at least one area has increased by 4 percent since fall 1997, and reached the highest level in the recent four years.

Reflecting the growing remedial demands of the fall 1998 entrants, the percentages of those students who needed developmental course work in individual basic skill areas increased at least by 3 percent over last year (see Table 3 on page 3). While mathematics remained the skill area where more students were found to be deficient, a 5-percent rise pushed the proportion of students with remedial needs in English up to 44 percent, the highest since fall 1992.

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Table 1. Placement of Fall 1998 Entrants Tested in All Three Skill Areas		
Placement Category	Headcount	Percentage
No Remediation Needed	449	28%
Remediation Needed	1,167	72%
In One Area	457	28%
In Two Areas	321	20%
In Three Areas	389	24%
Total	1,616	100%

Table 2. Entering Students Tested in All Three Skill Areas With Remedial Needs in at Least One Area Fall 1990 – Fall 1998		
Fall Semester	Number of Students Tested in All Three Skill Areas	Percentage with Remedial Needs
1998	1,616	72%
1997	1,562*	68%
1996	1,596	67%
1995	1,866	70%
1994	1,800	72%
1993	1,913	70%
1992	1,841	71%
1991	1,923	66%
1990	2,081	60%

* The number of students tested in all three skill areas in fall 1997 as previously reported by this office has been changed to include those students who entered the college in summer session 2 of the same year.

Table 3. Remedial Needs of Entering Students Tested in Each of the Three Skill Areas Fall 1994 – Fall 1998					
Skill Area	Fall Semester				
	1994	1995	1996	1997	1998
English					
Number of Students Tested	1,887	1,937	1,840	1,868*	1,927
Percentage with Remedial Needs	35%	35%	36%	39%*	44%
Mathematics					
Number of Students Tested	1,963	2,034	1,758	1,708*	1,842
Percentage with Remedial Needs	65%	61%	57%	57%	60%
Reading					
Number of Students Tested	1,954	1,988	1,878	1,942*	2,010
Percentage with Remedial Needs	32%	31%	30%	32%*	35%

* The number or percentage regarding basic skills testing or placement in fall 1997 as previously reported by this office has been changed to include those students who entered the college in summer session 2 of the same year.

Basic Skills Deficiencies of the 1998 County High School Graduates

Fall 1998 saw a similar pattern of basic skills deficiencies among the 1998 county high school graduates who entered PGCC that semester. As shown in Table 4 on page 4, more than two-thirds of those graduates who completed the placement test battery in all three basic skill areas had remedial needs in at least one area. A quarter of them were underprepared in all three areas. Moreover, Table 5 on page 4 indicates that, compared with the previous year, the proportion of tested graduates who needed remediation in at least one area experienced an increase of 3 percent to become the second largest since fall 1990.

There was also some increase in the percentages of the 1998 county high school graduates who needed developmental course work in individual basic skill areas (see Table 6 on page 5). As can be expected, mathematics remained the skill area where deficiencies were more common among graduates, and the proportion of students with remedial needs in English hit an all-time high since fall 1992.

Table 4. Placement of 1998 County High School Graduates Entering PGCC Tested in All Three Skill Areas		
Placement Category	Headcount	Percentage
No Remediation Needed	265	30%
Remediation Needed	607	70%
In One Area	206	24%
In Two Areas	183	21%
In Three Areas	218	25%
Total	872	100%

Table 5. County High School Graduates Tested in All Three Skill Areas With Remedial Needs in at Least One Area Fall 1990 – Fall 1998		
Fall Semester	Number of Students Tested in All Three Skill Areas	Percentage with Remedial Needs
1998	872	70%
1997	823*	67%
1996	860	65%
1995	950	67%
1994	886	71%
1993	945	68%
1992	926	68%
1991	908	66%
1990	1,037	57%

* The number of graduates tested in all three skill areas in fall 1997 as previously reported by this office has been changed to include those graduates who entered the college in summer session 2 of the same year.

Table 6. Remedial Needs of County High School Graduates Tested in Each of the Three Skill Areas Fall 1994 – Fall 1998					
Skill Area	Fall Semester				
	1994	1995	1996	1997	1998
English					
Number of Students Tested	896	963	882	899*	987
Percentage with Remedial Needs	39%	41%	41%	45%	47%
Mathematics					
Number of Students Tested	901	989	888	847*	920
Percentage with Remedial Needs	61%	53%	53%	51%*	54%
Reading					
Number of Students Tested	899	966	887	905*	996
Percentage with Remedial Needs	39%	39%	36%	40%	41%

* The number or percentage regarding basic skills testing or placement in fall 1997 as previously reported by this office has been changed to include those graduates who entered the college in summer session 2 of the same year.

Fall 1998 Collegewide Developmental Course Enrollment

Although there appeared to be more entering students required to do developmental course work in at least one basic skill area in fall 1998, Table 7 on page 6 reveals that the percentage of all credit students taking developmental courses in the same period only increased by half percent, thus remaining stable in the usual range between 15 and 17 percent that has characterized this enrollment index in the past several years.

While more than one-sixth of the credit students took at least one developmental course in fall 1998, the proportion became much larger with first-time students. Table 8 on page 6 shows that two-fifths of the entering students enrolled in at least one developmental class, a 2.4-percent rise compared with last year as a result of the increased presence of new students with remedial needs. As usual, more entering students only took one developmental course.

In fall 1998, student enrollment in developmental courses generated 10,864

Table 7. Students Enrolled in Developmental Courses Fall 1994 – Fall 1998					
Developmental Course Enrollment	Fall Semester				
	1994	1995	1996	1997	1998
One Course	1,524	1,538	1,326	1,342	1,377
Two Courses	388	431	351	348	432
Three Courses	110	122	95	65	84
Subtotal	2,022	2,091	1,772	1,755	1,893
Collegewide Headcount	12,201	12,050	11,696	11,962	12,435
Percentage Taking Developmental Courses	16.6%	17.4%	15.2%	14.7%	15.2%

Table 8. First-time Students Enrolled in Developmental Courses Fall 1994 – Fall 1998					
Developmental Course Enrollment	Fall Semester				
	1994	1995	1996	1997	1998
One Course	566	508	475	532	555
Two Courses	277	317	264	268	325
Three Courses	86	103	78	56	73
Subtotal	929	928	817	856	953
Total First-time	2,401	2,397	2,244	2,254	2,358
Percentage Taking Developmental Courses	38.7%	38.7%	36.4%	38.0%	40.4%

equated credit hours, which accounted for nearly 12 percent of the total college hours (see Table 9 on page 7). While the number of equated credit hours was up only by 1 percent collegewide, it grew by 14 percent in developmental education. In reading and learning support, the growth rate reached as high as 26 and 47 percent respectively. In mathematics, the equated credit hour increase was also noticeable.

Developmental Progress and Academic Outcomes of the Fall 1994 Entrants

A few years ago, the Office of Institutional Research and Analysis developed a typology of student outcomes at PGCC based on longitudinal cohort analysis. According to this typology, a given cohort of entering students can be classified into

Table 9. Equated Credit Hours in Developmental Courses Fall 1994 – Fall 1998					
Developmental Area	Fall Semester				
	1994	1995	1996	1997	1998
English	1,504	1,492	1,580	1,536	1,604
Mathematics	6,588	7,100	5,496	5,352	5,784
Reading	2,428	2,472	2,176	2,044	2,584
Learning Support	588	696	548	608	892
Subtotal	11,108	11,760	9,800	9,540	10,864
Collegewide Total	87,544	87,422	87,490	90,951	93,000
Percent in Developmental Courses	12.7%	13.5%	11.2%	10.5%	11.7%

the following categories in terms of their academic achievement by the end of a study period:

- Achievers

  Award and transfer -- Degree-seeking students who have earned a degree or certificate from the college and transferred to a senior institution within the study period.

  Transfer/no award -- Degree-seeking students who have transferred to a senior institution without having earned a degree or certificate from the college.

  Award/no transfer – Degree-seeking students who have earned a degree or certificate from the college for whom there is no evidence of transfer.

  Sophomore status in good standing – Degree-seeking students who have not yet earned a degree or certificate from the college, but who have earned at least 30 credits with a cumulative GPA of 2.0 or above, and for whom there is no evidence of transfer.

- Persisters

  Degree-seeking students who still enrolled at the college as of the last major semester of a study period, and who cannot be regarded as achievers.

- Non-achievers

  Degree-seeking students who exited the college without graduating or earning 30 credits in good standing for whom there is no evidence of transfer.

- Special Motives

  Students who have indicated short-term, non-degree goals, and who attended only during the first two semesters of a study period.

The above typology was used in the study of the developmental progress and academic outcomes of the fall 1994 entrants. A total of 2,247 first-time students entered PGCC that semester. With 227 of them identified as "special motives" and excluded from further analyses, the four-year academic outcomes of the 2,020 degree-seeking students in this cohort are summarized in Table 10 below.

Table 10. Four-year Outcomes of Fall 1994 Entrants (As of Summer I 1998)

Outcome	Headcount	Percentage
Achievers	460	23%
Award and Transfer	11	1%
Transfer/No Award	128	6%
Award/No Transfer	92	5%
Sophomore w/2.0+ GPA	229	11%
Persisters	57	3%
Non-achievers	1,503	74%
Total	2,020	100%

While the four-year achievement rate of 23 percent for the fall 1994 entrants was 5 percent lower than that for the fall 1990 entrants, it varied as a function of the students' initial placement results. For students identified as having no remedial needs through placement testing, their four-year achievement rate suffered a similar drop compared with that of their predecessors fours years ago (see Table 11 on page 9). For students required to take developmental course work in mathematics and at least one other area, their four-year achievement rate experienced a slight increase based on a similar comparison (see Table 12 on page 9). Still, this group of "developmental math plus" students remained the least successful group in the fall 1994 entrants with their four-year achievement rates as low as 13 percent (total) and

16 percent (first semester full-timers).

Table 11. Four-year Outcomes of Students Identified as Having No Remedial Needs Through Placement Testing

Outcome	Fall 1994 Entrants (As of Summer I 1998)		Fall 1990 Entrants (As of Spring 1994)	
	Total (N = 445)	First Semester Full-time (N = 291)*	Total (N = 861)	First Semester Full-time (N = 536)
Achievers	40%	50%	45%**	56%
Award and Transfer	1%	1%	4%	7%
Transfer/No Award	18%	25%	17%	24%
Award/No Transfer	8%	9%	5%	6%
Sophomore w/2.0+ GPA	13%	15%	18%	19%
Persisters	2%	2%	5%	4%
Non-achievers	58%	47%	50%	40%

* Percentages do not sum to 100 percent due to rounding.
** The percentage was rounded to the nearest whole percent.

Table 12. Four-year Outcomes of "Developmental Math Plus" Students

Outcome	Fall 1994 Entrants (As of Summer I 1998)		Fall 1990 Entrants (As of Spring 1994)	
	Total (N =591)	First Semester Full-time (N =276)	Total (N =628)	First Semester Full-time (N =281)
Achievers	13%*	16%*	11%*	17%*
Award and Transfer	<1%	<1%	<1%	1%
Transfer/No Award	1%	3%	2%	4%
Award/No Transfer	3%	3%	1%	2%
Sophomore w/2.0+ GPA	8%	10%	7%	9%
Persisters	5%	8%	9%	7%
Non-achievers	83%	77%	80%	76%

* The percentage was rounded to the nearest whole percent.

In general, the achievement levels of the fall 1994 entrants were closely related to the extent of their remedial needs. A total of 1,597 students in this cohort completed the placement test battery in all three areas. As Table 13 below indicates, two-fifths of the students who passed all the tests attained their achiever status after four years. This achievement rate shrank by half with students deficient in one or two areas, and by three-quarters with students deficient in all three areas. For the fall 1990 entrants, different achievement rates were reported for those underprepared in one area (28 percent) and those underprepared in two areas (17 percent). This pattern was not observed with the fall 1994 entrants.

Table 13. Four-year Outcomes of Students Tested in All Three Areas

Outcome	Fall 1994 Entrants (N=1,597) (As of Summer I 1998)		Fall 1990 Entrants (N=2,031) (As of Spring 1994)	
	Percentage of Group	Percentage Achievers	Percentage of Group	Percentage Achievers
No Remediation Needed	28%	40%	42%	45%
Remediation Needed	72%	16%	58%	18%
In One Area	33%	19%	19%	28%
In Two Areas	18%	18%	19%	17%
In Three Areas	21%	9%	20%	11%

For underprepared students in the fall 1994 cohort, achievement rates were also indicative of the progress they had made in their recommended developmental course work. Altogether 1,152 entering students were tested in all three basic areas and identified as being deficient in at least one area in fall 1994. As Table 14 on page 11 shows, about a quarter of them did not take any developmental course for various legitimate or illegitimate reasons. Students who took developmental courses but failed to pass them had an achievement rate of 5 percent. This rate slightly increased for students who passed at least one developmental course yet failed to complete the required remediation in any skill area (7 percent), and more than tripled for students who completed the required remediation in at least one skill area (18 percent). It was encouraging that students who completed all their developmental work achieved at about the same rate (41 percent) as their peers who did not need remediation (40 percent, see Table 11). The linear relationship between underprepared students' developmental progress and academic outcomes was found with the fall 1990 cohort as well.

Summary

Using the fall 1994 and 1998 entrants as samples, this enrollment analysis

Table 14. Four-year Outcomes of Underprepared Students by Developmental Status				
Developmental Status	Fall 1994 Entrants (N=1,152) (As of Summer I 1998)		Fall 1990 Entrants (N=1,170) (As of Spring 1994)	
	Percentage of Group	Percentage Achievers	Percentage of Group	Percentage Achievers
No course taken	23%	17%	22%	21%
Courses taken/none passed	22%	5%	18%	4%
Courses passed/no area completed	23%	7%	17%	11%
Some areas completed	18%	18%	27%	15%
All areas completed	15%	41%	16%	46%

assessed the scope of basic skills deficiencies among PGCC students, the proportion of PGCC instruction devoted to developmental education, and the academic outcomes of underprepared students as a function of their developmental progress. Its major findings include the following:

- About seven-tenths of the entering students at PGCC in fall 1998 who completed the placement test battery in all three basic skill areas had remedial needs in at least one area.
- The percentages of underprepared students in individual basic skill areas increased at least by 3 percent over the previous year.
- A similar pattern of increasing basic skills deficiencies was observed among the 1998 county high school graduates who entered PGCC in the fall semester of the same year.
- More than one-sixth of the credit students took at least one developmental course in fall 1998.
- Developmental courses accounted for 12 percent of the total fall 1998 college hours.
- The four-year achievement rate for the fall 1994 entrants was 5 percent lower than that for the fall 1990 entrants.
- Entering students who passed all the placement tests in fall 1994 were more likely to become academic achievers than their peers with remedial needs.

- Fall 1994 entering students who completed all their developmental work achieved at about the same rate as their peers who did not need remediation.

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